

WHAT IS CLAIMED IS:

1. A method for operating a wireless network, comprising:
- (a) collecting and analyzing information from the wireless network into a collection and analysis system, wherein the information includes location information on mobile transceivers operating within the network; and
- (b) optimizing the wireless network's operation from a network control system using the collected and analyzed information.
2. The method of claim 1, wherein the location information comprises E911 location information.
3. The method of claim 1, wherein the information further includes one or more types of information selected from a group comprising Hand Off (HO) information, Power information, Measurements, and System Parameters from the wireless network.
4. The method of claim 1, wherein the information is collected when certain defined thresholds are triggered.
5. The method of claim 1, wherein the optimizing step further comprises dynamically allocating radio frequency (RF) signal power in the wireless network based on the collected and analyzed information.

6. The method of claim 5, wherein the dynamically allocating step further comprises dynamically assigning RF signal power to cells, sectors within cells, and mobile transceivers based on the collected and analyzed information.

5 7. The method of claim 1, wherein the optimizing step further comprises setting dynamic dedicated handoff (HO) thresholds for individual mobile transceivers based on the collected and analyzed information.

8. The method of claim 7, wherein the individual mobile transceivers each have
10 a unique, assigned HO (hand off) threshold.

9. The method of claim 8, wherein the optimizing step further comprises performing handoffs for individual mobile transceivers based on their unique, assigned HO (hand off) threshold and their location.
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10. The method of claim 9, wherein the performing step comprises performing handoffs for individual mobile transceivers in order to minimize interference levels.

11. The method of claim 1, wherein the optimizing step further comprises
20 intelligently forming radio frequency (RF) signal beams using the collected and analyzed information.

12. The method of claim 11, wherein the intelligently forming step further comprises steering an RF signal beam in the direction of one or more mobile transceivers

based on the collected and analyzed information.

13. The method of claim 1, further comprising identifying and resolving problems using the collected and analyzed information.

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14. The method of claim 13, wherein the identifying and resolving step further comprises identifying problems in the wireless network, and correlating the identified problems with the collected and analyzed information.

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15. The method of claim 14, wherein the correlating step further comprises correlating the identified problems with mobile transceiver location information from the collected and analyzed information.

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~~16.~~ A system for operating a wireless communications network, comprising:

(a) a data collection and filter system, coupled to the wireless communications system, for collecting and analyzing information from the wireless network, wherein the information includes location information on mobile transceivers operating within the network; and

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(b) a network control system, coupled to the wireless communications system and the data collection and filter system, for optimizing the wireless network's operation using the collected and analyzed information.

17. The system of claim 16, wherein the location information comprises E911 location information.

18. The system of claim 16, wherein the information further includes one or more types of information selected from a group comprising Hand Off (HO) information, Power information, Measurements, and System Parameters from the wireless network.

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19. The system of claim 16, wherein the information is collected when certain defined thresholds are triggered.

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20. The system of claim 16, wherein the network control further comprises means for dynamically allocating radio frequency (RF) signal power in the wireless network based on the collected and analyzed information.

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21. The system of claim 20, wherein the means for dynamically allocating further comprises means for dynamically assigning RF signal power to cells, sectors within cells, and mobile transceivers based on the collected and analyzed information.

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22. The system of claim 16, wherein the network control further comprises means for setting dynamic dedicated handoff (HO) thresholds for individual mobile transceivers based on the collected and analyzed information.

23. The system of claim 22, wherein the individual mobile transceivers each have a unique, assigned HO (hand off) threshold.

24. The system of claim 23, wherein the network control further comprises means for performing handoffs for individual mobile transceivers based on their unique, assigned HO (hand off) threshold and their location.

5 25. The system of claim 24, wherein the means for performing comprises means for performing handoffs for individual mobile transceivers in order to minimize interference levels.

10 26. The system of claim 16, wherein the network control further comprises means for intelligently forming radio frequency (RF) signal beams using the collected and analyzed information.

15 27. The system of claim 26, wherein the means for intelligently forming further comprises means for steering an RF signal beam in the direction of one or more mobile transceivers based on the collected and analyzed information.

28. The system of claim 16, wherein the data collection and analysis system further comprises means for identifying and resolving problems using the collected and analyzed information.

20 29. The system of claim 28, wherein the means for identifying and resolving further comprises means for identifying problems in the wireless network, and correlating the identified problems with the collected and analyzed information.

